

## DECLARATION FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below), or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

### **$\beta$ -L-2'-Deoxy-Nucleosides for the Treatment of Hepatitis B Virus**

the specification of which (check one)

\_\_\_\_\_ is attached hereto.  
  x   was filed on 8/10/99  
as application Serial No. 09/371,747  
\_\_\_\_\_ and was amended on:  
\_\_\_\_\_ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability and examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority  
Claimed

(Number)

(Country)

(Day/Month/Year Filed)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of the application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.

Filing Date

Status

60/096,110

August 10, 1998

pending

60/131,352

April 28, 1999

pending

As named inventor, I hereby appoint the following attorney(s) or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

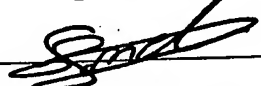
Sherry M. Knowles, Reg. No. 33,052  
Jacqueline Haley, Reg. No. 41,457  
Curtis L. Doster, Reg. No. 41,714

Send Correspondence to: Sherry M. Knowles, Esq.  
King & Spalding  
191 Peachtree Street  
Atlanta, Georgia 30303-1763

Direct telephone calls to: Sherry M. Knowles (404) 572-3541

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Gilles Gosselin

Inventor's signature 

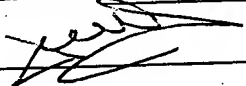
Date August 20, 1999

Residence 82 Rue Calvin, 400 Avenue Paul Rimbaud, 34080 Montpellier France

Citizenship France

Post Office Address Same as above

Full name of second joint inventor Jean-Louis Imbach

Inventor's signature 

Date August 20, 1999

Residence 1108 Rue las Sorbes, Impasse des Luquesop, 34000 Montpellier, France

Citizenship France

Post Office Address Same as above

Full name of third joint inventor Martin L. Bryant

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_

Residence 65 Hickory Lane, Carlisle, MA 01741

Citizenship U.S.A.

Post Office Address Same as above

Full name of fourth joint inventor \_\_\_\_\_

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_

Residence \_\_\_\_\_

Citizenship \_\_\_\_\_

Post Office Address Same as above

Send Correspondence to: Sherry M. Knowles, Esq.  
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Full name of sole or first inventor Gilles Gosselin

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence 82 Rue Calvin, 400 Avenue Paul Rimbaud, 34080 Montpellier France

Citizenship France

Post Office Address Same as above

Full name of second joint inventor Jean-Louis Imbach

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence 1108 Rue las Sorbes, Impasse des Luquesop, 34000 Montpellier, France

Citizenship France

Post Office Address Same as above

Full name of third joint inventor Martin L. Bryant

Inventor's signature Martin L. Bryant Date 9/3/99

Residence 65 Hickory Lane, Carlisle, MA 01741

Citizenship U.S.A.

Post Office Address Same as above

Full name of fourth joint inventor \_\_\_\_\_

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence \_\_\_\_\_

Citizenship \_\_\_\_\_

Post Office Address Same as above

SEP 27 1993

[illegible]

ASSIGNMENT


WHEREAS, WE, GILLES GOSSELIN, JEAN-LOUIS IMBACH, AND MARTIN BRYANT have invented certain improvements in "β-L-2'-Deoxy-Nucleosides for the Treatment of Hepatitis B" for which we have executed United States provisional application nos. 60/131,352 and 60/096,110 which were filed on April 28, 1999 and August 10, 1998 respectively; and U.S. Application No. 09/371,747 which was filed on August 10, 1999 and

WHEREAS, NOVIRIO PHARMACEUTICALS LIMITED, a Cayman Island corporation having an office at c/o Walker Secretaries, Walker House, Grand Cayman, Cayman Islands desires to purchase same;

NOW, THEREFORE, in consideration of the sum of Five Dollars (\$5.00) and other good and valuable consideration paid by NOVIRIO PHARMACEUTICALS, LIMITED, the receipt and sufficiency of which are hereby acknowledged, I, MARTIN BRYANT, have sold, assigned, transferred and conveyed and by these presents do hereby sell, assign, transfer and convey unto NOVIRIO PHARMACEUTICALS, LIMITED, in and for the United States and its territories and for foreign countries, the entire right, title and interest in and to said provisional application and said application for United States Letters Patent, in and to the invention therein set forth and in and to any patent which may issue on said provisional applications for United States Letters Patent or any application, reissue, renewal, division, continuation or continuation-in-part thereof; and I hereby bind myself, my heirs, legal representatives, administrators and assigns properly to execute without further consideration, any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect the sale, assignment, transfer and conveyance hereby made or intended to be made.

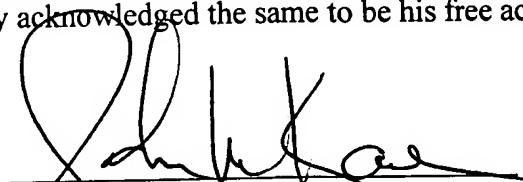
IN WITNESS WHEREOF, I have hereunto set my hand and seal this 3 day of

September, 1999.

  
MARTIN BRYANT

STATE OF Massachusetts )  
 )  
COUNTY OF ) ss.

On this 3<sup>rd</sup> day of September, 1999, before me, a notary public, came  
MARTIN BRYANT, to me known and known to be the individual described in and  
who executed the foregoing assignment, and he duly acknowledged the same to be his free act  
and deed.

  
Notary Public

My commission expires: 2/17/06

(SEAL)

## ASSIGNMENT

WHEREAS, WE, GILLES GOSSELIN, JEAN-LOUIS IMBACH, AND MARTIN BRYANT have invented certain improvements in "β-L-2'-Deoxy-Nucleosides for the Treatment of Hepatitis B" for which we have executed United States provisional application nos. 60/131,352 and 60/096,110 which were filed on April 28, 1999 and August 10, 1998 respectively; and U.S. Application No. 09/371,747 which was filed on August 10, 1999 and

WHEREAS, Centre National Da La Recherche Scienrifique (CNRS), a public agency operating under the supervisory authority of France's Ministry of Research and Technology, located at 3, Rue Michel-ange 75794, Paris, cedex 16, France desires to purchase same;

NOW, THEREFORE, in consideration of the sum of Five Dollars (\$5.00) and other good and valuable consideration paid by Centre National Da La Recherche Scientifique , the receipt and sufficiency of which are hereby acknowledged, I, GILLES GOSSELIN, have sold, assigned, transferred and conveyed and by these presents do hereby sell, assign, transfer and convey unto Centre National Da La Recherche Scientifique , in and for the United States and its territories and for foreign countries, the entire right, title and interest in and to said provisional application and said application for United States Letters Patent, in and to the invention therein set forth and in and to any patent which may issue on said provisional applications for United States Letters Patent or any application, reissue, renewal, division, continuation or continuation-in-part thereof; and I hereby bind myself, my heirs, legal representatives, administrators and assigns properly to execute without further consideration, any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect the sale, assignment, transfer and conveyance hereby made or intended to be made.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 20 day of

August, 1999.



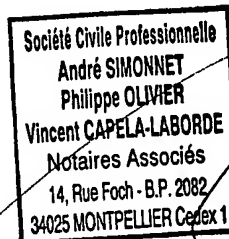
GILLES GOSSELIN

On this 20 day of August, 1999, before me, a notary public, came  
Gilles Gosselein, to me known and known to be the individual described in and  
who executed the foregoing assignment, and he duly acknowledged the same to be his free act  
and deed.

Notary Public

My commission expires: \_\_\_\_\_

(SEAL)





## ASSIGNMENT

WHEREAS, WE, GILLES GOSSELIN, JEAN-LOUIS IMBACH, AND MARTIN BRYANT have invented certain improvements in " $\beta$ -L-2'-Deoxy-Nucleosides for the Treatment of Hepatitis B" for which we have executed United States provisional application nos. 60/131,352 and 60/096,110 which were filed on April 28, 1999 and August 10, 1998 respectively; and U.S. Application No. 09/371,747 which was filed on August 10, 1999 and

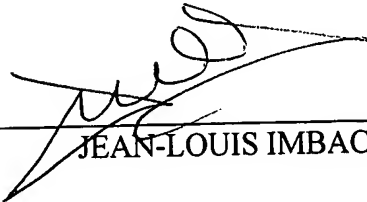
WHEREAS, Centre National Da La Recherche Scientifique (CNRS) a public agency operating under the supervisory authority of France's Ministry of Research and Technology, located at 3, Rue Michel-ange 75794, Paris, cedex 16, France desires to purchase same;

NOW, THEREFORE, in consideration of the sum of Five Dollars (\$5.00) and other good and valuable consideration paid by Centre National Da La Recherche Scienrifique , the receipt and sufficiency of which are hereby acknowledged, I, JEAN-LOUIS IMBACH, have sold, assigned, transferred and conveyed and by these presents do hereby sell, assign, transfer and convey unto Centre National Da La Recherche Scientifique , in and for the United States and its territories and for foreign countries, the entire right, title and interest in and to said provisional application and said application for United States Letters Patent, in and to the invention therein set forth and in and to any patent which may issue on said provisional applications for United States Letters Patent or any application, reissue, renewal, division, continuation or continuation-in-part thereof; and I hereby bind myself, my heirs, legal representatives, administrators and assigns properly to execute without further consideration, any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect the sale, assignment, transfer and conveyance hereby made or intended to be made.

to be made.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 20 day of

August, 1999.

  
\_\_\_\_\_  
JEAN-LOUIS IMBACH

On this 20 day of August, 1999, before me, a notary public, came Jean-Louis Imbach, to me known and known to be the individual described in and who executed the foregoing assignment, and he duly acknowledged the same to be his free act and deed.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

(SEAL)



10-01-1999

SEP 27 1999

FORM-PTO-1595  
1-31-92

TRANSM



101159234

ATION

Atty. Docket 06171.105005

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies): Gilles Gosselin, Jean-Louis Imbach, And Martin Bryant

Additional name(s) of conveying party(ies) attached?  
☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name

Other

Execution Date: 8/20/99, 8/20/99, and 9/3/99

2. Name and address of receiving party(ies):

Name: Novirio Pharmaceuticals Limited  
Foreign Address: c/o Walker Secretaries  
Walker House  
Grand Cayman, Cayman Islands

Domestic Address:

City: State: ZIP:

Additional name(s) &amp; address(es) attached?

☒ Yes ☐ No

4. Application number (s) or patent numbers(s):

If this document is being filed together with a new application, the execution date of the application is: 6/24/99 :

A. Patent Application No.(s) 60/131,352, 60/096,110 B Patent Registration No. (s)  
and 09/371,747Additional numbers attached ? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Sherry M. Knowles, Esq.

191 Peachtree Street

Atlanta, Georgia 30303-1763

Telephone No.: 404- 572- 4600

Facsimile No.: 404 572-5100

6. Number of applications and patents involved:

three

7. Total fee (37 CFR 3.41): \$ 80

☒ Enclosed☒ Authorized to be charged to deposit account

8. Deposit account number

11-0980

(Attach duplicate copy of this page if paying by deposit account):

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy of the original document.

Jacqueline Haley

Name of Person Signing

Signature

September 22, 1999

Date

Total number of pages comprising cover sheet: 2

09/30/1999 HKHARA 00000008 09371747 80.000000  
02 FC:581



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

DECEMBER 16, 1999

PTAS

SHERRY M. KNOWLES, ESQ.  
191 PEACHTREE STREET  
ATLANTA, GEORGIA 30303-1763



\*101159234A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 09/27/1999

REEL/FRAME: 010271/0725  
NUMBER OF PAGES: 8

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
GOSSELIN, GILLES

DOC DATE: 08/20/1999

ASSIGNOR:  
IMBACH, JEAN-LOUIS

DOC DATE: 08/20/1999

ASSIGNOR:  
BRYANT, MARTIN

DOC DATE: 09/03/1999

ASSIGNEE:  
NOVIRIO PHARMACEUTICALS LIMITED  
C/O WALTER STREET, WALKER HOUSE  
GRAND CAYMAN, CAYMAN ISLANDS

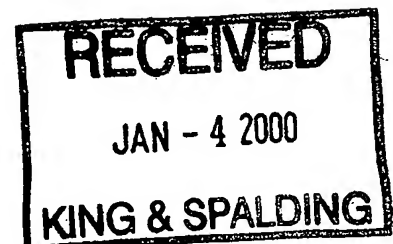
ASSIGNEE:  
CENTRE NATIONAL DA LA RECHERCHE  
SCIENTIFIQUE  
3, RUE MICHEL-ANGE  
75794, PARIS, CEDEX 16, FRANCE

Docket No. 06171.105005 US

Attorney SMK

Due Date NDD

Date Docketed 1/7/2000 Smt



010271/0725 PAGE 2

SERIAL NUMBER: 60131352  
PATENT NUMBER:

SERIAL NUMBER: 60096110  
PATENT NUMBER:

SERIAL NUMBER: 09371747  
PATENT NUMBER:

FILING DATE: 04/28/1999  
ISSUE DATE:

FILING DATE: 08/10/1998  
ISSUE DATE:

FILING DATE: 08/10/1999  
ISSUE DATE:

KIMBERLY WHITE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231



\*101159234B\*

AUTHORIZATION TO CHARGE ADDITIONAL FEES TO DEPOSIT ACCOUNT

DECEMBER 16, 1999

TO: OFFICE OF FINANCE  
FROM: ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS  
SUBJECT: DEPOSIT ACCOUNT CHARGE(S)

CHARGE THE DEPOSIT ACCOUNT LISTED BELOW ADDITIONAL FEE(S) AS INDICATED  
BELOW. AUTHORIZATION TO CHARGE ADDITIONAL FEES HAS BEEN PROVIDED PER  
THE ATTACHED COVER SHEET, OR BY DIRECT CONTACT WITH THE CUSTOMER.

DEPOSIT ACCOUNT NUMBER: 110980  
PROPERTY NUMBER: 60131352

RECORDING FEES:

FEE CODE: 581 AMOUNT: 40

IF YOU HAVE ANY QUESTIONS REGARDING THIS NOTICE, YOU MAY CONTACT  
THE INDIVIDUAL WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.

KIMBERLY WHITE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

TRADEMARK SERVICE FEES:

RECORDING FIRST MARK  
RECORDATION SECOND AND  
SUBSEQUENT MARK IN SAME DOCUMENT  
LABOR CHARGES FOR SERVICES PER HOURS  
OR FRACTION THEREOF  
UNSPECIFIED OTHER SERVICES

FEE CODE:

481  
482  
484  
485

PATENT SERVICE FEES:

RECORDING EACH PATENT ASSIGNMENT,

581

AGREEMENT, OTHER PAPER, PER PROPERTY	
LABOR CHARGES FOR SERVICES PER HOUR	584
(\$30) OR FRACTION THEREOF	
UNSPECIFIED OTHER SERVICES	585